AIR POLLUTION CONTROL DISTRICT

Strategic Toxic Air Reduction (STAR) Program
Request for Modification and Proposed Action

Facility Name: American Synthetic Rubber Company
Owner: Michelin North America, Inc.
Address: 4500 Campground Road, Louisville, KY 40216
Plant ID: 0011
Date: June 15, 2016

Request for Modification and Proposed Action

American Synthetic Rubber Company, a division of Michelin North America, Inc. (ASRC), has requested a modification of several Strategic Toxic Air Reduction (STAR) Program Environmental Acceptability (EA) goals pursuant to Regulation 5.21. The request includes a demonstration of the Toxics Best Control Technology (T-BAT) for the affected processes.

The Louisville Metro Air Pollution Control District (District) is proposing to approve the request for modification pursuant to Regulation 5.21 section 5.9, which includes an opportunity for public review and comment and a public hearing, and subject to specific permit conditions drafted to assure compliance.

Background

ASRC manufactures synthetic rubber products, polybutadiene rubber, styrene butadiene rubber by solution, and liquid polymer on a 60.5 acre site in southwest Jefferson County. The facility was originally constructed by the United States Government in 1943 within the industrial area known as "Rubbertown" to provide a vital supply of synthetic rubber during World War II. ASRC is subject to a variety of local and federal air pollution regulations, including the Hazardous Organic National Emission Standards for Hazardous Air Pollutants (the HON), 40 CFR 63 Subparts F-I, which require the implementation of certain measures deemed by the U.S. Environmental Protection Agency (EPA) to be the Maximum Available Control Technology (MACT), and the STAR Program.

In 2005, the Air Pollution Control Board adopted the STAR Program regulations requiring certain industrial emitters of toxic pollutants to demonstrate the environmental acceptability of their toxic air emissions (TACs). The STAR Program requires companies subject to the regulations to submit EA Demonstrations and model individual and plant-wide

emissions of TACS to estimate risks to offsite industrial and non-industrial properties. Companies with emissions that exceed the STAR Program's EA goals are required to submit a compliance plan pursuant to Regulation 5.21 section 4, or request a modification, which includes a T-BAT demonstration, pursuant to section 5.

In 2006, ASRC submitted a required EA demonstration for Category 1 and 2 Toxic Air Contaminants ("TACs"). On June 30, 2007, ASRC demonstrated that its emissions of all TACs met the plant-wide EA goal of 7.5 in a million for non-industrial property and 75 in a million for industrial property. The company also demonstrated that it met the single TAC/single process goal for emissions of 1,3-Butadiene from the flare on industrial property and submitted a Request for Modification of an EA Goal and T-BAT demonstration for flare and fugitive emissions of 1,3-Butadiene based on annual emissions of 19,000 lbs. from the flare and 2,868 lbs. from fugitive sources as shown in Table 1.

Table 1
2007 Request for Modification

	Receptors	**EA Goal**	**Proposed Modified Goal**
		Cancer Risk ($x10^{-6}$)	
All TACs/All Processes	Non-Industrial receptors	7.5	No modification requested.
	Industrial receptors	75	No modification requested.
Single TAC/Single Process 1,3-butadiene, Flare	Industrial receptors	10	No modification requested.
	Non-Industrial receptors	1	2.12
Single TAC/Single Process 1,3-butadiene, Fugitives	Industrial receptors	10	42.10
	Non-Industrial receptors	1	1.94

The following measures were proposed as T-BAT:

1. For the flare, the use of the Flare TO as the primary control device shall constitute T-BAT, so long as the flare is operated no more than 10% of allowed operating time (876 hours out of 8760), and throughput to the flare and flare TO is limited to 9,500,000 lbs. annually.

2. For fugitive emission sources, the enhanced Leak Detection and Repair (LDAR) provisions as shown in Table 2.

Table 2
2007 Enhanced LDAR Monitoring/T-BAT

LDAR Monitoring Component Type	HON-Required LDAR Monitoring	2007 Enhanced LDAR Monitoring/T-BAT
Valves	Annually	Semi-annually
Connectors	Every 4 years	Semi-annually
Pumps and Agitator Seals	Monthly	Monthly
Pressure Relief Valves	Annually	Semi-annually
Closed Vent Systems	Annually	Semi-annually
Potentially Open-Ended Lines	Every 4 years	Semi-annually
Instruments	Exempt	Semi-annually

On October 13, 2008, the District determined that the enhanced LDAR provisions were T-BAT for the affected processes and provisionally approved the company's 2007 request for modification.

In April 2015, the District determined that emissions of 1,3-Butadiene exceeded the modified EA goals for emissions from fugitive sources and that future emissions from these sources were likely to also exceed the modified amounts approved in 2008. During the same time period, emissions of 1,3-Butadiene from the Flare TO continued to meet the modified EA goals approved by the District in 2008.

As a result, the District issued Notice of Violation Letter 02612 to ASRC on September 21, 2015, and requested that the company submit a revised EA demonstration and compliance plan to address the higher emissions from fugitive sources

Requested EA Goal Modification and T-BAT Demonstration

On December 7, 2015, ASRC responded to the District's Notice of Violation and submitted a revised EA demonstration and the Request for Modification and Upset Condition Prevention Plan. The Request for Modification and Upset Condition Prevention Plan is included as Attachment 1. The company is requesting to increase its emissions of 1,3-Butadiene from

fugitive sources from 2,868 lbs. to 6,994 lbs. per year. No increase in the emissions of 1,3-Butadiene from the flare, i.e., 19,000 lbs., is requested.

As part of its revised EA demonstration, ASRC has demonstrated that emissions of all TACs will meet the plant-wide EA goal of 7.5 in a million for non-industrial property and that it will meet the single TAC/single process goal for emissions of 1,3-Butadiene from the flare on industrial property. ASRC has requested that the District approve the modified EA goals based on annual 1,3-Butadiene emissions of 19,000 lbs. from the flare and 6,994.6 lbs. from fugitive sources as shown in Table 3.

Table 3
2015 Request for Modification

	Receptors	**EA Goal**	**Proposed Modified Goal**
		Cancer Risk ($x10^{-6}$)	
All TACs/All Processes	Industrial receptors	75	100
	Non-Industrial receptors	7.5	No modification requested.
Single TAC/Single Process 1,3-butadiene, Flare	Industrial receptors	10	No modification requested.
	Non-Industrial receptors	1	1.93
Single TAC/Single Process 1,3-butadiene, Fugitives	Industrial receptors	10	94.42
	Non-Industrial receptors	1	4.30

Additional limits and measures proposed as T-BAT are more fully set forth in Attachment 2. They include, among other things, the following:

1. For the flare, the use of the Flare TO as the primary control device shall constitute T-BAT, so long as the flare is operated no more than 10% of allowed operating time (876 hours out of 8760), and combined throughput to the flare and Flare TO is limited to 9,500,000 lbs. annually.

2. For fugitive emission sources, all of the following:

    a. Replacement of all rupture disks in 1,3-butadiene service (completed in 2015);

    b. Threshold for first attempt to fix a leak reduced to 250 ppm for components in 1,3-butadiene service;

c. Leaks greater than 500 ppm that cannot be repaired within the 15 day timeframe as required by 40 CFR Subpart H and placed on delay of repair will be resolved within 90 days, unless cost exceeds $5,000; and

d. The enhanced LDAR provisions as shown in Table 4.

Table 4
2015 Enhanced LDAR Monitoring

Component Type in Enhanced Monitoring 1,3-Butadiene Service	Single TAC goal modification	Cumulative TAC goal modification
Valves	Semi-Annually	Quarterly
Connectors	Semi-Annually	Quarterly
Pumps and Agitator Seals	Monthly	Monthly
Pressure Relief Valves	Semi-Annually	Monthly
Compressors	Semi-Annually	Monthly
Closed Vent Systems	Semi-Annually	Quarterly (Visual, Olfactory, and Auditory Method)
Potentially Open-Ended Lines	Semi-Annually	Quarterly
Instruments	Semi-Annually	Quarterly
Components that are designated as "unsafe to monitor" or "difficult-to-monitor"	Semi-Annually	Annually

The District is proposing to approve the company's request for modification and T-BAT demonstration as satisfying the requirements of Regulation 5.21 section 5.9. Necessary emission standards, and work practices, which include the T-BAT requirements included in the company's request for modification, have been incorporated into draft permit provisions that include enforceable standards, recordkeeping, reporting, and monitoring requirements and are included as Attachment 2. Upon final approval by the District, the draft provisions will be included in the renewal Title V Operating Permit that will subsequently be issued to the company. T-BAT shall be re-evaluated by the company every five years at permit renewal. If the District determines, at

any time after approving a modified EA goal, that a revised T-BAT would achieve greater compliance with the EA goal, the District may require the owner or operator to implement the revised T-BAT in accordance with Regulation 5.21 section 5.

As an interim measure, ASRC entered into an Agreed Board Order with the Air Pollution Control Board on May 16, 2016, which requires, among other things, that ASRC implement all of the proposed T-BAT, including the 2016 enhanced LDAR provisions, and provide quarterly reports of its efforts to the District until such time as the District may issue a permit with any modified STAR environmental acceptability goals. This Agreed Board Order is included as Attachment 3. A final Agreed Board Order to fully resolve the noncompliance issues identified in Notice of Violation Letter 02612 will be presented at a later date to the Air Pollution Control Board for their approval.

Public Review and Comment on the Request for Modification

The Request for Modification, including the referenced attachments, may be downloaded for review at https://louisvilleky.gov/government/air-pollution-control-district/services/proposed-actions-apcd. Written Statements will be accepted by the Board Secretary-Treasurer, Rachael Hamilton, Louisville Metro Air Pollution Control District, 701 W. Ormsby Ave., Louisville, Ky 40203, until 5:00 p.m., July 18, 2016. Written statements will also be accepted electronically until the same deadline via the Internet at the e-mail address "airregs@louisvilleky.gov". Oral statements will be accepted at the public hearing to be announced at a later date.